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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)	
SUT-0232	

Application Number	Filed
10/758,022-Conf. #6241	January 16, 2004
First Named Inventor: Shoichi OKAMURA et al.	
Art Unit: 2882	Examiner: A. C. Ho

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant /inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 22,663 29,211

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34. _____

Signature

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October 23, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of 1 Form is submitted.

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PATENT & TRADEMARK OFFICE

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:	Attorney Docket No.: SUT-0232
Shoichi OKAMURA et al.	
	Examiner: Allen C. Ho
Application No.: 10/758,022	Art Unit: 2882
Filed: January 16, 2004	Confirmation No.: 6241
For: RADIOGRAPHIC APPARATUS	

ARGUMENTS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Examiner issued an Advisory Action dated September 28, 2006, in response to Applicant's Amendment After Final Rejection under 37 CFR 1.116 filed on September 14, 2006. Applicant's Amendment After Final Rejection was filed in response to the final Office Action dated June 23, 2006. A complete listing of the claims and the appropriate status identifiers can be found in Applicant's Response After Final Rejection on pages 2-4. Amendments were made to the claims in Applicant's Amendment After Final Rejection. However, as indicated in the Advisory Action, the amendments will be entered for purposes of appeal.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as anticipated by Hsieh (US Patent No: 5,249,123). The rejection is respectfully traversed.

In summary, "lag" in the subject application has a phenomenon completely different from that of "afterglow" in Hsieh. This will be specifically explained below.

The following is stated as the definition of the "afterglow" in Col. 1, L60 to Col.2, L6 of Hsieh (U55,359,638).

"Each X-ray detector 14 comprises a scintillator and solid state photodiode. X-rays striking the scintillator produce light photons which are absorbed by the photodiode creating an electric current. The light is not emitted by the scintillators instantaneously,

rather the emission follows a multi-exponential curve. Similarly the light emission does not terminate immediately when the X-ray beam is extinguished, but produces a response from the detector having a decay which can be defined by a multi-exponential function. The time dependence of output signal intensity can be modeled accurately as a sum of several exponential terms with different decay constants. Because the detector array is rotating rapidly about the patient, the exponential decay blurs together detector readings for successive views producing an image artifact referred to as "afterglow"."

That is, "afterglow" described in Hsieh is defined as a phenomenon in which the light is not instantaneously emitted when X-ray enters the scintillator, and in which the light emission does not terminate immediately when the X-ray is extinguished. This phenomenon is approximated with N number of exponential functions and expressed as a recursive calculation equation, which is the equation of dividing by $\Sigma\beta$ shown as equation 5 of Hsieh. The "afterglow" is also handled as the same phenomenon in Hsieh (US 6,493,646). That is, the affect is shown to converge at a very short time order (about 0.01 ms in Fig. 4), as shown in Fig. 4. This is an obvious result when considering the delay time constant of the general scintillator. On the other hand, the subject invention uses a flat panel X-ray detector for X-ray perspective photographing as the detector.

As described in the specification of the subject invention, the detector does not produce the phenomenon of "afterglow" at all, the problem addressed by Hsieh, since the minimum photographing interval is about 1/30sec. That is, the subject invention and Hsieh address completely different matters as a problem.

That is, in the device of the subject invention, the phenomenon of "afterglow" converges from after emission of radiation until the start of reading even if the scintillator is arranged in the photoelectric transfer layer, and thus does not assume the influence of the "afterglow" on the next photography session.

Therefore, the phenomenon of "lag" defined in the subject invention is produced completely independent from the light emitting delay that occurs when the scintillator of Hsieh is used, and is not derived from the model of Hsieh.

The Examiner has found that those skilled in the art can easily replace "constant" with "1" since dividing the numerator by "constant", as shown in equation 5 of Hsieh, is equivalent to the image brightness adjustment, but this finding is not correct.

EU in Hsieh is the ratio of the true signal and the afterimage signal. That is, dividing the numerator by $\Sigma\beta$ is met on the assumption that light emission of the scintillator gradually rises. Furthermore, $\Sigma\beta$ is the ratio of the true signal and the afterimage signal and thus does not become "1". That is, the denominator must take a very small value.

Therefore, for the afterimage property of the subject invention, the configuration of correcting the "lag" of the subject invention cannot be achieved unless a new model that is completely different from the model shown in Hsieh is contrived. In other words, those skilled in the art cannot easily contrive the subject invention from the model of Hsieh based on the idea similar to the image brightness adjustment.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of claim 1. As a result, it is respectfully submitted that claim 1 is allowable over the applied art. Claims 3-5 depend from claim 1 and include all of the features of claim 1. Thus, it is respectfully submitted that that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite.

Withdrawal of the rejection is respectfully requested.

The Office Action provisionally rejects claims 1, 2 and 6 under five (5) separate rejections as being unpatentable over one issued patent and four different co-pending applications as follows:

1. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 9, 14 and 15 of U.S. Patent No. 7,006,599.

2. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 2, 4, 10 and 11 of copending application number 10/853,357 (our file no. SUT-0236).

3. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 2 and 5 of copending application number 10/887,920 (our file no. SUT-0242).

4. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 3 and 8 of copending application number 10/958,297 (our file no. SUT-0253).

5. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 3 and 8 of copending application number 10/958,297 (our file no. SUT-0253).

The Office Action asserts that although the conflicting claims are not identical, they are also not patently distinct from each other.

In determining double patenting, the issue is whether any claim of the application defines merely an obvious variation of an invention **claimed** in the earlier patent or application. It does not prohibit a later claiming of subject matter that is disclosed but not claimed in the earlier patent or application. It is respectfully submitted that these obviousness-typed double patenting rejections are improper because claim 1 includes features not shown or suggested in the reference patent or pending applications.

The United States Patent and Trademark Office must establish a *prima facie* case of obviousness-type double-patenting or the rejection, if applied, will be reversed by the Board of Patent Appeals. The Examiner is obligated to clearly set forth the basis of an obviousness-type double-patenting rejection. Under MPEP 804 II. B. 1., it states:

> Any obviousness-type double patenting rejection should make clear:
>
> (A) The differences between the inventions defined in the conflicting claims--a claim in the patent compared to a claim in the application; and
>
> (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.

It is respectfully submitted that the rejection is improper because the Examiner fails to make clear the obviousness-type double patenting rejection, particularly

subparagraphs (A) and (B) above. As a result, it is respectfully submitted that the Examiner fails to establish a *prima facie* case of obviousness-type double patenting.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

Date: October 23, 2006

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Enclosure(s): Notice of Appeal
Pre-Appeal Brief Request for Review
Petition for Extension of Time (1 month)